

Board on Environmental Change and Society | Board on Agriculture and Natural Resources

The Social-Ecological Consequences of Future Wildfire in the West: A Workshop

Invited Speaker Bios

Edward Alexander

Edward Alexander represents Gwich'in internationally as the Co-Chair of Gwich'in Council International and has been appointed by the Chiefs of Alaska for multiple terms in this role. He serves as the Head of Delegation to the Senior Arctic Officials, and to the Conservation of Arctic Flora and Fauna (CAFF) and Emergency Prevention, Preparedness, and Response (EPPR) Working Groups of the Arctic Council. Additionally, he serves as the Co-Chair of the Arctic Council's Chairship Initiative of Wildland Fire. He also served as the 2nd Chief of the Gwichyaa Zhee Gwich'in for seven years. Edward has a Master's Degree in Secondary Education from the University of Alaska Fairbanks, and a current Type A Alaska Teaching Certification. He found wildland fire for eight seasons across Alaska and the western United States. He has worked as a secondary teacher, principal, in administration, managing the University of Alaska's Yukon Flats Campus, and as the Education Director for the thirty seven tribes of the Tanana Chiefs Conference. He founded and operates the consulting firm "The Village Consultants" which is focused on tribal sovereignty, village development, Indigenous education, and climate issues. Additionally, Edward founded and operates a small family farm, "Gwich'in Grown" which is dedicated to organic and regenerative agricultural and land management practices, which produces broiler chickens, eggs, and seasonal vegetables.

Jessica Block

Jessica Block is the Associate Director for Operational Programs of the WIFIRE Lab at the San Diego Supercomputer Center, UCSD. Her work aims to mitigate disasters using emerging technologies including satellites, sensor networks, machine learning tools, and virtual reality. She has spent her career addressing fire, water, and geologic risks in the American West and Southeastern Australia. In 2019, she was appointed by Gov. Gavin Newsom to the California Wildfire Safety Advisory Board.

Judson Boomhower

Judson Boomhower is an assistant professor in the Department of Economics at the University of California San Diego and a Faculty Research Fellow at the National Bureau of Economic Research (NBER). His research focuses on environmental economics, energy markets, climate risk and adaptation, and the design of environmental and energy policy. Judson is a contributor to the U.S. National Climate Assessment, an invited researcher at the Abdul Latif Jameel Poverty Action Lab (J-PAL) and a faculty affiliate at the E2e initiative. He joined UC San Diego after a postdoctoral fellowship at the Stanford Institute for Economic Policy Research. He earned his Ph.D. in Agricultural and Resource Economics at the University of California, Berkeley and BA and MS degrees from Stanford University. He is an Andrew Carnegie Fellow, a former Fulbright Scholar, and an award-winning undergraduate teacher.

Amy Cardinal Christianson

Dr. Amy Cardinal Christianson is Métis and grew up in Treaty 8 territory (northern Alberta, Canada). Her Métis relations are the Cardinal (Peeaysis Band) and Laboucane (Laboucane Settlement) families. She currently lives near Rocky Mountain House in Treaty 6 (central Alberta). Christianson was formerly a Research Scientist with the Canadian Forest Service (Natural Resources Canada) and an Indigenous Fire Specialist in the National Fire Management Division of Parks Canada. Christianson works with Indigenous Nations across Canada on fire stewardship practices like cultural burning and collaborates with Indigenous peoples from around the world on decolonising land management. She also studies wildfire evacuations and advocates for Indigenous wildland firefighters. She is the co-author of the books, *First Nations Wildfire Evacuations: A guide for communities and external agencies* and *Blazing the Trail: Celebrating Indigenous Fire Stewardship*. Christianson also cohosts the Good Fire podcast, which looks at Indigenous fire use around the world. She serves on the steering committee of the Thunderbird Collective, the board of the International Association of Wildland Fire and the international research advisory panel with Natural Hazards Research Australia.

Susan Cutter

Dr. Susan Cutter is a Carolina Distinguished Professor of Geography at the University of South Carolina and co-director of the Hazards Vulnerability & Resilience Institute (HVRI). She has authored or edited 15 books, 200+ plus peer-reviewed articles and book chapters, and mentored more than 75 master's and doctoral candidates. Her research focusses on vulnerability and resilience science with specific reference to methods, models, and metrics. Her scientific contributions include the hazards of place model of vulnerability, the disaster resilience of place model, as well as tools for assessing spatial and temporal variability in vulnerability (Social Vulnerability Index or SoVI®) and resilience (Baseline Resilience Indicators for Communities [BRIC] Index). Her policy-relevant work focuses on the evidentiary basis for hazard mitigation and disaster recovery policy and practice at local, state, national, and international levels. In particular, she continues to lead investigations of the disproportionate spatial and temporal impacts of disasters on vulnerable populations and the places where they live. Dr. Cutter is an elected fellow of American Association for the Advancement of Science (AAAS). She was also the recipient of her discipline's highest awards: American Association of Geographers (AAG) Lifetime Achievement, Presidential Achievement, and the Wilbanks Award for Transformation Research. She received an honorary doctorate from the Norwegian University of Science and Technology (2015) and elected as a foreign member of the Royal Norwegian Society of Sciences and Letters that same year. In 2024, Susan became an elected member of both the American Academy of Arts and Sciences and the U.S. National Academy of Sciences.

Mike Flannigan

Mike Flannigan is the BC Innovation Research Chair for Predictive Services, Emergency Management and Fire Science at Thompson Rivers University and the Scientific Director of the Canadian Partnership for Wildland Fire Science. He received his BSc (Physics) from the University of Manitoba, his MS (Atmospheric Science) from Colorado State University and his Ph.D. (Plant Sciences) from Cambridge University. Dr. Flannigan has been studying fire and weather/climate interactions including the

potential impact of climatic change and lightning-ignited forest fires for over 40 years. Dr. Flannigan has published over 300 journal papers, book chapter and reports.

Caitlin Fong

Cat is a Research Associate with NCEAS and is currently leading the Western Wildfire Resilience Index (WWRI) project. Her research is at the interface of social and ecological systems with the goal of solving sustainability challenges by supporting societal decision-making and addressing key issues of environmental justice and sustainable development. Previously, Cat was an NSF postdoc studying anthropogenic stressors to tropical reefs, then an NCEAS postdoc exploring aquaculture as a sustainable pathway for meeting growing food demands. She earned her Ph.D. in 2016 at UCSB where her dissertation investigated parasite population and community ecology.

Sarah Henderson

Dr. Sarah Henderson is the scientific director of Environmental Health Services at BCCDC and of the National Collaborating Centre for Environmental Health (NCCEH). She is also an associate professor in the UBC School of Population & Public Health. Sarah oversees a program of applied environmental health research, surveillance, and knowledge translation to support evidence-based policy in BC and across Canada. She has studied wildfire smoke and its population health effects for over 20 years.

Philip Higuera

Philip Higuera is a professor of fire ecology in the Department of Ecosystem and Conservation Sciences at the University of Montana. He directs the *PaleoEcology and Fire Ecology Lab*, funded largely from the National Science Foundation and Joint Fire Science Program, and he teaches undergraduate and graduate courses in fire and disturbance ecology. Research in his lab spans western North America and broadly addresses interactions among climate, wildfire, ecosystems, and people, across timescales of years to millennia. This work has revealed how fire activity varies with climate change in recent decades and the distant past, and how forest ecosystems respond to past and ongoing changes. Since 2016, collaborative efforts have increasingly focused on understanding wildfire as an integrated social-ecological phenomenon, helping address current societal challenges centered around living with wildfire.

Ronald Ignace

Stsmé'iqen, Ronald E. Ignace, is a member of the Secwepemc Nation in Interior British Columbia. He was the elected chief of the Skeetchestn Indian Band for more than 30 years since the early 1980s. He also served as Chairman of the Shuswap Nation Tribal Council and president of its cultural society, where he initiated a broad program of research and reclamation on Secwepemc language and culture, including an innovative university partnership with Simon Fraser University (SFU). He holds a B.A. and M.A. in Sociology from the University of British Columbia, and completed his Ph.D. in Anthropology at SFU in 2008, with a dissertation on Secwepemc oral history. He has (co-)written numerous articles and

book chapters on Secwepemc history, ethnobotany, language and culture, including the epic Secwepemc People, Land and Laws: Yerí7 re stsq̓eys-kucw, a journey through 10,000 years of Secwepemc history. From 2003-2005, he chaired the Ministerial Task Force on Aboriginal Languages and Cultures, and from 2016-2021, co-chaired the Assembly of First Nations' Chiefs Committee on Languages, where he played an instrumental role in the development of Bill C-91, the Indigenous Languages Act. Raised by his great-grandparents Sulyen and Edward Eneas, and despite being taken to Kamloops Indian Residential School for several years in his childhood, Ron is a fluent speaker of Secwepemctsin and has more than sixty years of practical experience in Secwepemc traditional skills on the land. With his wife Marianne Ignace, he was awarded the Governor General's Award for Innovation in 2019, for their decades of collaborative research involving Indigenous people and communities.

Marianne Ignace

Dr. Ignace has a joint appointment with Indigenous Studies and Director, First Nations Language Centre. Dr. Ignace completed her Ph.D. dissertation on the politics of Haida symbols which was published as *The Curtain Within: Haida Social and Symbolic Discourse*. She has also published articles on Haida oratory and Potlatching. For the past twenty years, Dr. Ignace has focused her research on the Secwepemc (Shuswap) people of the Plateau, where her interests are aboriginal land use and occupancy, ethnobotany, traditional ecological knowledge, ethnohistory, and the linguistic and anthropological analysis of Aboriginal language discourse. She has authored and co-authored papers in various journals and books on these topics, and has also carried out research in the field of Aboriginal language revitalization, some of which is published in the *Handbook for Aboriginal Language Program Planning* in B.C. In recent years, she has worked with First Nations communities and elders on various language revitalization projects, including Secwepemctsin, St'at'imcets, Heiltsuk, Nuxalk, Haida and Sm'algyax.

Karl Kim

Received undergraduate education from Brown University and Ph.D. in Urban Studies and Planning from the Massachusetts Institute of Technology. He is Editor-in-chief of *Transportation Research: Interdisciplinary Perspectives*; Associate Editor of *Transportation Research, Part D, Transport and Environment*; and formerly Editor-in-chief of *Accident Analysis and Prevention* and formerly Editor of *Korean Studies*. He has received more than \$67 million in research and training grants from federal, state, and international agencies and organizations. Served as Chairman, National Domestic Preparedness Consortium (ndpc.us). Previously served as Vice Chancellor for Academic Affairs (Chief Academic Officer) of the University of Hawaii at Manoa, overseeing strategic planning, accreditation, tenure and promotion, and international programs. Holds faculty appointments in the Center for Korean Studies, and the School of Architecture. Serves on several committee of the Transportation Research Board. Served as Chair of the Pacific Risk Management Ohana. Elected to the Board of North American Alliance of Hazards and Disaster Research Institutes (NAAHDRI).

Peter Lahm

Pete Lahm is the Air Resource Specialist and Smoke Program Branch Chief for USDA Forest Service, State and Private Forestry, Fire and Aviation Management, in Washington, DC. Pete leads the Forest Service's national smoke management efforts developing technical approaches and policies related to smoke impacts from prescribed fire and wildfires. He chairs the National Wildfire Coordinating Group's Smoke Committee and leads the Interagency Wildland Fire Air Quality Response Program, which provides personnel, technical specialists called Air Resource Advisors, smoke modeling and monitoring capabilities to develop smoke forecasts for communities adversely affected by smoke.

Irene Lusztig

Irene Lusztig is a feminist filmmaker, archival researcher, educator, and amateur seamstress. She works in a space of delicate mediation between people, their pasts, and the present-tense spaces and landscapes where unresolved histories bloom and erupt. Often beginning with rigorous research in archives, her work brings historical materials into conversation with the present, inviting viewers to contemplate questions of politics, ideology, and the complex ways that personal, collective, and national memory are entangled. She is invested in expanding the form of artful nonfiction through her lyrical use of archival images, her commitment to listening-centered and collaborative methods, patient durational shooting, and open-ended editing. She is the director, producer, and editor of three acclaimed feature length documentaries that have screened widely in festivals and are distributed by Women Make Movies: her debut film *Reconstruction* (2001), the feature length archival film essay *The Motherhood Archives* (2013), and the performative documentary *Yours in Sisterhood* (2018). Her fourth and newest feature length work, *Richland*, takes place in and around the Eastern Washington nuclear company town that produced weapons-grade plutonium for the Nagasaki atomic bomb, and premiered at Tribeca in 2023. Born in England and raised in Boston, Irene is a first generation American whose parents left Ceaucescu's Romania as political defectors. Her work has been screened around the world, including at the Berlinale, MoMA, Film Society of Lincoln Center, Museum of Fine Arts Boston, Anthology Film Archives, Pacific Film Archive, Flaherty NYC, IDFA Amsterdam, Hot Docs, Sheffield DocFest, AFI Docs, BFI London Film Festival, Melbourne Film Festival, DocLisboa, and RIDM Montréal. She has been awarded fellowships from the Guggenheim Foundation, the Radcliffe Institute for Advanced Study, the Fulbright, two MacDowell fellowships, the Flaherty Film Seminar, and the Rydell Visual Arts Fellowship. She teaches filmmaking at UC Santa Cruz where she is Professor of Film and Digital Media.

Sarah McCaffrey

Sarah McCaffrey, Ph.D., retired in 2022 after 20 years as a fire social scientist with the USDA Forest Service where her research focused on understanding the social dynamics of fire management. Research topics included risk perception and risk attitudes, social acceptability of prescribed fire, homeowner mitigation decisions, evacuation decision making, and agency-community interactions during fires. In 2009 she assisted the Bushfire Cooperative Research Centre with their post-fire data collection following the February 7th 2009 bushfires and was subsequently named a USDA liaison to the Victorian Bushfires Royal Commission. More recent work examined internal barriers to use of fire as a management tool and how response to the fire problem might better allow for more holistic

consideration of both social and ecological concerns. Since retirement she has been involved with a number of research and practitioner efforts to improve future fire outcomes including as an adviser to the Gordon and Betty Moore Foundation's Wildfire Resilience Initiative and a Board member for Fire Adapted Colorado. She received her Ph.D. in 2002 from the University of California at Berkeley where her dissertation examined Incline Village, Nevada homeowner views and actions in relation to defensible space and fuels management.

Tara McGee

Dr. Tara K. McGee is a professor in the human geography group in the department of earth and atmospheric sciences at the University of Alberta. She is a wildfire social scientist whose research program extends over 25 years and includes research on wildfire prevention, FireSmart mitigation at property and community levels, preparedness, and evacuation response. She has conducted and participated in research in Canada and overseas. She co-leads the First Nations Wildfire Evacuation Partnership.

Michael Méndez

Dr. Michael Méndez is an assistant professor of environmental policy and planning at the University of California, Irvine, an Andrew Carnegie Fellow, and Visiting Scientist at the National Center for Atmospheric Research (NCAR). He previously was the inaugural James and Mary Pinchot Faculty Fellow in Sustainability Studies and Associate Research Scientist at the Yale School of the Environment. Michael has more than a decade of senior-level experience in the public and private sectors, where he consulted and actively engaged in the policymaking process. This included working for the California State Legislature as a senior consultant, lobbyist, member of the California State Mining & Geology Board, and as vice-chair of the Sacramento City Planning Commission. In 2021, California Governor Gavin Newsom appointed Dr. Méndez to the Los Angeles Regional Water Quality Control Board. The board regulates water quality in a region of 11 million people. In 2023, he was appointed by Deanne Crisell, the Administrator of the Federal Emergency Management Agency (FEMA), to serve on their National Advisory Council. In this capacity, council members advise the Administrator on all aspects of emergency management, including preparedness, protection, response, recovery, and mitigation for natural disasters, acts of terrorism, and other manmade disasters. His award-winning book "Climate Change from the Streets," published through Yale University Press (2020), is an urgent and timely story of the contentious politics of incorporating environmental justice into global climate change policy.

Elisabeth Middleton

Dr. Beth Rose Middleton Manning (Afro-Caribbean and Eastern European), Prof. of Native American Studies, UC Davis. Her research centers the Indigenous and rural environmental justice impacts of natural resource infrastructure and policy, using environmental laws and processes for protection of cultural places and lifeways, assessing and improving environmental health impacts, and collaborating on climate adaptation with Native communities. She has published on rural and Indigenous environmental justice, environmental and tribal law, political ecology, and historic and contemporary

environmental policy.

Miranda Mockrin

Miranda Mockrin is a research scientist with the USDA Forest Service's Northern Research Station (Baltimore, MD) who studies land use, combining ecological and social science. Much of her current research focuses on residential development, including mapping the growth of the wildland-urban interface (WUI) over time, examining community recovery and adaptation after wildfire, and studying the effects of land use policies on forest conservation.

Max Moritz

Max got his Ph.D. in biogeography in 1999, has been a statewide wildfire specialist with UC Cooperative Extension since 2004, and is an adjunct professor at the Bren School at UCSB. Much of his research is on the dynamics and effects of fire regimes at relatively broad scales, including drivers of fire hazard, projections of climate change effects, and home loss studies. Through his extension activities, Max aims to apply scientific information for sustainable planning and management decisions on fire-prone landscapes.

Stephen Pyne

Steve Pyne is an emeritus professor at Arizona State University and the author, most recently, of *The Pliocene: How We Created an Age of Fire, and What Happens Next* and *Five Suns: A Fire History of Mexico*. He has written over 30 books, mostly on the history and management of wildland and rural fire, including big-screen surveys for the U.S., Canada, Australia, Europe (including Russia), and the world generally, and is completing a multi-volume fire history of the U.S. and its regions since 1960. His exploration research includes books on Antarctica, the Grand Canyon, the Voyager mission, and a biography of Grove Karl Gilbert. He teaches courses on fire, history of exploration and science, and nonfiction writing.

Emily Schlickman

Emily Schlickman is an assistant professor of landscape architecture and environmental design at the University of California, Davis. In a broad sense, her research and creative work sits along two primary axes – 1) how to support climate adaptation through landscape stewardship and land use planning techniques and 2) how to experiment with and critically evaluate emerging tools and technologies for design. Her current research on wildfire adaptation aims to collectively shift perceptions of and relationships with fire by challenging normative approaches in the field and offering alternatives that foreground care and decolonization. Emily received a BA from Washington University in St. Louis in International Studies and Environmental Studies and an MLA from the Harvard University Graduate School of Design. Prior to the University of California, Davis, Emily worked professionally as a landscape and urban designer and a practice-based researcher.

Robert Taylor

Robert Taylor has a BS in biology from the University of California Berkeley, MS in restoration ecology from the University of Wisconsin - Madison, and a PhD in biogeography from the University of California Santa Barbara. He has worked as a Geographer and a Fire GIS Specialist for the US National Park Service's Mediterranean Coast Network for the last 22 years, based at the Santa Monica Mountains National Recreation Area. He has compiled and produced geospatial data to document more than a century of ongoing fire history in Ventura and Los Angeles Counties, and has mapped hundreds of wildfires. He has provided geospatial and statistical support for a wide variety of natural resource management and public fire safety programs for the National Park Service in coastal Southern California. He co-authored the Santa Monica Mountains Community Wildfire Protection Plan, and has contributed to production of a series of Fire Management Plans for the Santa Monica Mountains National Recreation Area, Channel Islands National Park, and Cabrillo National Monument. He has also provided GIS support to the US Fish and Wildlife Service's Ventura Field Office.

Haizhong Wang

Dr. Haizhong Wang is a Professor within the School of Civil and Construction Engineering at Oregon State University, Corvallis, OR. Dr. Wang received M.S. and Ph.D. degrees from University of Massachusetts, Amherst in Applied Mathematics and Civil Engineering (Transportation), and B.S. and M.S. degrees from Hebei University of Technology and Beijing University of Technology, China. Dr. Wang's overarching career goals are to educate and inspire engineering students and guide their development into the world's future leaders in providing innovative solutions and addressing complex global problems related to climate change, resilience to extreme events, people health, and decarbonization to promote social, economic, cultural, and environmental progress of all people. His research focuses on the human dimension of resilience through an integrated and interdisciplinary agent-based modelling framework to couple social, natural, and engineered systems to address social-technical research questions. Dr. Wang is also actively involved in the American Society of Civil Engineers (ASCE) Infrastructure Resilience Division (IRD) and serving on the Critical Infrastructure and Lifeline System Committee (CILSC). He serves as the associate editors for ASCE Natural Hazards Review and Transportation Research Interdisciplinary Perspectives. He is the 2014 recipient of the Outstanding Reviewer for ASCE Journal of Transportation Engineering, Jacob Multidisciplinary Collaboration Award for OSU 2018 Undergraduate Expo, and the recipient of the 2023 PacTrans Researcher of the Year Award. Dr. Wang has published over 95 journal papers and 80 major conference papers, he has attracted 5.5 million (his share) external funding from ten different federal or state funding sources. Notably, Dr. Wang have had multiple NSF or ASCE supported reconnaissance data collection trips including the 2017 Mexico Earthquake, the 2018 Indonesia Palu Earthquake and Tsunami, the 2018 Attica Wildfire in Mati, Greece, and the 2023 Maui Wildfire.

Michael Wara

Michael Wara is a lawyer, scholar and advisor focused on sustainability policy. Wara is the Senior Director of Policy within Stanford's Sustainability Accelerator where he connects Stanford students and faculty with cutting edge policy debates on climate, energy, and sustainability, leveraging Stanford's analytical expertise to craft real world solutions to these challenges. Wara is also Director of the Climate and Energy Policy Program and a senior research scholar at the Stanford Woods Institute for the Environment, where he provides fact-based, bipartisan, technical and legal assistance to

policymakers engaged in the development of novel climate and energy law and regulation. Wara was an appointee to the California Wildfire Commission which made recommendations to the state on better managing utility caused wildfires and served on the California Catastrophe Response Council, the oversight board of the Wildfire Fund. Wara has advised the California Senate, the California Public Utilities Commission and the California Office of Electric Infrastructure Safety on strategies to address the wildfire crisis. Wara also serves on the Tamalpais Valley Design Review Board in Marin County. Prior to joining Woods, Wara was an associate professor at Stanford Law School and an associate in Holland & Knight's government practice. He received his J.D. from Stanford Law School and his Ph.D. in Ocean Sciences from the University of California at Santa Cruz.

Marian Weber

Dr. Marian Weber currently serves as Manager in the Disaster Recovery Division of British Columbia's (BC's) Ministry of Emergency Management and Climate Readiness. Her roles include providing provincial coordination on issues related to rebuilding after the 2023 wildfires and updating policies for private disaster financial assistance. From 2019-2023 Marian served as Manager of Natural Resource Sector Socio-Economic Analysis with BC's Ministry of Land Water and Resource Stewardship as well as Chief Environmental Economist with BC's Ministry of Environment and Climate Change Strategy. She was responsible for assessing the socio-economic implications of natural resource sector policies – including implications for ecosystem services, climate risk and community resilience – to support Executive and Cabinet decisions. Prior to joining the BC Government Marian was Principal Researcher with Alberta Innovates, a provincially owned research corporation, where she worked with academia, industry, First Nations, government, and non-government partners on the design of incentives and policies to support ecosystem services and nature-based solutions including conservation offsets and tradable disturbance permits. Marian has a Ph.D. in Economics from the University of Alberta and is Adjunct Professor in its Department of Resource Economics and Environmental Sociology.

Kelsey Winter

Kelsey Winter is the mother of three young girls and her and her husband are grateful to be able to raise their family on the traditional lands of the lək'wəŋən Peoples, today known as the Esquimalt and Songhees Nations. Today referred to as Victoria, BC, Canada. She is the Manager of Wildfire Operations Research at FPIInnovations, a national not-for-profit that specializes in creating solutions that accelerate the growth of the Canadian forest sector. Winter's team utilizes operations research projects to assist wildfire agency partners in increasing their positive impacts in the wildfire management ecosystem. She is a Ph.D. candidate with University of Victoria Public Administration, focusing on barriers to wildfire resiliency. Winter has an interest in learning how policy can make space for Indigenous communities to prepare and recovery from wildfire. She has a background in Natural Resources, Fire Ecology and Fire Management and before FPIInnovations worked for the BC Wildfire Service for over a decade.